

5' TGCAG ATT GGT TGG GGC AGC CCG GGG AGG CTG GCT CCG ACA CAC GAC TGA GTG TGC 56
 11 20 29 38 47
 CTA CAC TGG TCC CAC AGG TTT TCA GCT GTG GAG TTT GGG ATC TGA GCT TGG AGC 110
 65 74 83 92 101
 CCA TTT GTT TCT GGC AGT TCC GCT CAT ATT TTC CAC TTG AAG ACA TCG CCT CCC 164
 119 128 137 146 155
 TTC CTT CCA AGC TGG GAG ACC AGA AGT CAA CAA CAG GAG GGT GGA GAG GCC GGG 218
 173 182 191 200 209
 TCT CAC AAT CCG CTT GGC TGG GGA GTC CAC TGA GGT TCT TGC ATC CTG AAG CAA 272
 227 236 245 254 263
 ACC ATG GAG AGC TGG TGG GGA CTT CCC TGT CCC TGT CTT GCG TTC CTG TGT TTT CTA ATG 326
 M E S W W G L P C L A F L C F L M
 281 290 299 308 317
 CAC GCC CGA GGT CAA AGA GAC TTT GAT TTG GCA GAT GCC CTT GAT GAC CCT GAA 380
 335 344 353 362 371
 H A R G Q R D F D L A D A L D D P E
 389 398 407 416 425 434
 CCC ACC AAG AAG CCA AAC TCA GAT ATC TAC CCA AAG CCA AAA CCT TAC TAC TAC
 P T K K P N S D I Y P K P K P P Y Y

FIGURE 1A

443	452	461	470	479	488
CCA CAG CCC GAG AAT CCC GAC AGC GGT GGA AAT ATC TAC CCA AGG CCA AAG CCA					
P Q P E N P P D S G G N I Y P R P K P					
497	506	515	524	533	542
CGC CCT CAA CCC CAG CCT GGC AAT TCC GGC AAC AGT GGA GGT TAC TTC AAT GAT					
R P Q P P Q P G N S G N S G G Y F N D					
551	560	569	578	587	596
GTG GAC CGT GAT GAC GGA CGC TAC CCG CCC AGG CCA CGG CCG CCT GCA					
V D R D D G G R Y P P R P R P P A					
605	614	623	632	641	650
GGA GGT GGC GGC GGT GGC TAC TCC AGT TAT GGC AAC TCC GAC AAC ACG CAC GGA					
G G G G G G Y S S Y G N S D N T H G					
659	668	677	686	695	704
AGA GGG GGC TAT AGA CCC AAC TCT CGT TAT GGA AAT ACT TAT GGT GGA GAT CAC					
R G G Y R P N S R Y G N T Y G G D H					
713	722	731	740	749	758
CAT TCA ACG TAT GGC AAT CCA GAA GGC AAT ATG GTA GCA AAA ATC GTG TCT CCC					
H S T Y G N P E G G N M V A K I V S P					
767	776	785	794	803	812
ATC GTA TCC GTG GTG GTG GTG ACA CTG GGA GCA GCA GCC AGT TAT TTC AAA					
I V S V V V V T L L L G A A A S Y F K					

FIGURE 1B

821	830	839	848	857	866
CTA AAC AAT AGG AGA AAT TGT TTC AGG ACC CAT GAA CCA GAA AAT GTC TGA AGA					
L N N R R N N C F R T H E P E N V					
875	884	893	902	911	920
TGT TAA GAT CCC CTG ATT ACT TTG GGA AAA ACA ACT AAA ACA ACC GTG TTT					
929					
ATC AAA AAA AAA AAA 3'					

FIGURE 1C

1	MESWWGLPCLAF	L	C	F	L	M	H	A	R	G	Q	R	D	F	D	L	A	D	A	2297891						
1	MESWWGLPCLAF	L	C	F	L	M	H	A	R	G	Q	R	D	F	D	L	A	D	A	GI 2499136						
31	LDDPEPTKKP	N	S	D	I	Y	P	K	P	K	P	P	Y	Y	P	Q	P	E	N	P	D	2297891				
31	LDDPEPTKKP	N	S	D	I	Y	P	K	P	K	P	P	Y	Y	P	Q	P	E	N	P	D	GI 2499136				
61	SGGNIYP	R	P	K	P	R	P	Q	P	Q	P	G	N	S	G	N	S	G	G	Y	F	N	D	V	2297891	
61	SGGNIYP	R	P	K	P	R	P	Q	P	Q	P	G	N	S	G	N	S	G	G	Y	F	N	D	V	GI 2499136	
91	DRDDGRY	P	P	R	P	R	P	P	A	G	G	G	G	G	Y	S	S	Y	G	N	S	2297891				
91	DRDDGRY	P	P	R	P	R	P	P	A	G	G	G	G	G	Y	S	S	Y	G	N	S	GI 2499136				
121	DNTHGRGGY	R	P	N	S	R	Y	G	N	T	Y	G	G	D	H	H	S	T	Y	G	N	P	2297891			
121	DNTHG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G	D	H	H	S	T	Y	G	N	P	GI 2499136
151	EGNMMV	A	K	I	V	S	P	I	V	S	V	V	V	T	L	L	G	A	A	S	Y	F	K	L	2297891	
136	EGNMMV	A	K	I	V	S	P	I	V	S	V	V	V	T	L	L	G	A	A	S	Y	F	K	L	GI 2499136	
181	NNRRNC	F	R	T	H	E	P	E	N	V	2297891															
166	NNRRNC	F	R	T	H	E	P	E	N	V	GI 2499136															

FIGURE 2

5' GAGAG AAT AGC TAC AGA TTC TCC ATC CTC AGT CTT TGC AAG GCG ACA GCT GTG CCA 56
 11 20 29 38 47
 65 74 83 92 101 110
 GCC GGG CTC TGG CAG GCT CCT GGC AGC ATG GCA GTG AAG CTT GGG ACC CTC CTG
 M A V K L G T L L
 119 128 137 146 155 164
 CTG GCC CTT GCC CTG GGC CTG GCC CAG CCA GCC TCT GCC CGC AAG CTG CTG
 L A L A L G L A Q P A S A R R K L L
 173 182 191 200 209 218
 GTG TTT CTG CTG GAT GGT TTT CGC TCA GAC TAC ATC AGT GAT GAG GCG CTG GAG
 V F L L D G G F R S D Y I S D E A L E
 227 236 245 254 263 272
 TCA TTG CCT GGT TTC AAA GAG ATT GTG AGC AGG GGA GTA AAA GTG GAT TAC TTG
 S L P G G F K E I V S R G V K V D Y L
 281 290 299 308 317 326
 ACT CCA GAC TTC CCT AGT CTC TCG TAT CCC AAT TAT TAT ACC CTA ATG ACT GGC
 T P D F P S L S Y P N Y Y T L M T G
 335 344 353 362 371 380
 CGC CAT TGT GAA GTC CAT CAG ATG ATC GGG AAC TAC ATG TGG GAC CCC ACC ACC
 R H C E V H Q M I G N Y M W D P T T

FIGURE 3A

389	398	407	416	425	434
AAC AAG TCC TTT GAC ATT GGC GTC AAC AAA GAC AGC CTA ATG CCT CTC TGG TGG					
N K S F D I G V N K D S L M P L W					
443	452	461	470	479	488
AAT GGA TCA GAA CCT CTG TGG GTC ACT CTG ACC AAG GCC AAA AGG AAG GTC TAC					
N G S S E P L W V T L T K A K R K V Y					
497	506	515	524	533	542
ATG TAC TAC TGG CCA GGC TGT GAG GTT GAG ATT CTG GGT GTC AGA CCC ACC TAC					
M Y Y W P G C E V E I L G V R P T Y					
551	560	569	578	587	596
TGC CTA GAA TAT AAA AAT GTC CCA ACG GAT ATC AAT TTT GCC AAT GCA GTC AGC					
C L E Y K N V P T D I N F A N A V S					
605	614	623	632	641	650
GAT GCT CTT GAC TCC TTC AAG AGT GGC CGG GCC GAC CTG GCA GCC ATA TAC CAT					
D A L D S F K S G G R A D L A A I Y H					
659	668	677	686	695	704
GAG CGC ATT GAC GTG GAA GGC CAC CAC TAC GGG CCT GCA TCT CCG CAG AGG AAA					
E R I D V E G H H Y G P A S P Q R K					
713	722	731	740	749	758
GAT GCC CTC AAG GCT GTA GAC ACT GTC CTG AAG TAC ATG ACC AAG TGG ATC CAG					
D A L K A V D T V L K Y M T K W I Q					

FIGURE 3B

767	GAG CGG GGC CTG CAG GAC CGC CTG AAC GTC ATT ATT TTC TCG GAT CAC GGA ATG	776	785	794	803	812
	E R G L Q D R L N V I I F S D H G M					
821	ACC GAC ATT TTC TGG ATG GAC AAA GTG ATT GAG CTG AAT AAG TAC ATC AGC CTG	830	839	848	857	866
	T D I F W M D K V I E L N K Y I S L					
875	AAT GAC CTG CAG CAA GTG AAG GAC CGC GGG CCT GTT GTG AGC CTT TGG CCG GCC	884	893	902	911	920
	N D L Q Q V K D R G P V V S L W P A					
929	CCT GGG AAA CAC TCT GAG ATA TAT AAC AAA CTG AGC ACA GTG GAA CAC ATG ACT	938	947	956	965	974
	P G K H S E I Y N K L S T V E H M T					
983	GTC TAC GAG AAA GAA GCC ATC CCA AGC AGG TTC TAT TAC AAG AAA GGA AAG TTT	992	1001	1010	1019	1028
	V Y E K E A I P S R F Y Y K K G K F					
1037	GTC TCT CCT TTG ACT TTA GTG GCT GAT GAA GGC TGG TTC ATA ACT GAG AAT CGA	1046	1055	1064	1073	1082
	V S P L T L V A D E G W F I T E N R					
1091	GAG ATG CTT CCG TTT TGG ATG AAC AGC ACC GGC AGG CGG GAA GGT TGG CAG CGT	1100	1109	1118	1127	1136
	E M L P F W W M N S T G R R E G W Q R					

FIGURE 3C

1145	1154	1163	1172	1181	1190
GGA TGG CAC GGC TAC GAC AAC GAG CTC ATG GAC ATG CGG GGC ATC TTC CTG ACT					
G W H G G Y D N E L M D M R G I F L T					
1199	1208	1217	1226	1235	1244
CTC GGA CCT GGT AGG CGA GGA AAT GAC CAG ATG CTC TCA GAC CCC ATT CCC AAG					
L G P G G R R G N D Q M L S D P I P K					
1253	1262	1271	1280	1289	1298
GAA GTG TCT CTA AGG GGC CCT ACG GGT GCC AGG AGA GGC TGC AGG GAT TTC CTC					
E V S L R G G P T G A R R G C R D F L					
1307	1316	1325	1334	1343	1352
ACA GAC CCT CTT TAT GAG CCA AGC AGA GCA AAC CCA GCC GGT CTC CAT GAA ACA					
T D P L L Y E P S R A N P A G L H E T					
1361	1370	1379	1388	1397	1406
TCT TTT GCT GGC TTC CTT TCA AAT GCT TCT TGG GTT TGG CAA ATG TAG CCA AAT					
S F A G G F L S N A S W V W Q M					
1415	1424	1433			
ACT GTG CCG TGT AAA TTT TAA ATC CTG CAG CA 3'					

FIGURE 3D

27 L V F L L D G F R S D Y I S D - E A L E S L P G F K E I V S 2705267
161 L L F S L D G F R A E Y L H T W G G L - - L P V I S K L K K GI 189650

56 R G V K V D Y L T P D F P S L S Y P N Y Y T L M T G R H C E 2705267
189 C G T Y T K N M R P V Y P T K T F P N H Y S I V T G L Y P E GI 189650

86 V H Q M I G N Y M W D P T T N K S F D I G V N K D S L M P L 2705267
219 S H G I I D N K M Y D P K M N A S F S L K - S K E K F N P E GI 189650

116 W W N G S E P L W V T L T K A K R K V Y M Y Y W P G C E V E 2705267
248 W Y K G - E P I W V T A K Y Q G L K S G T F F W P G S D V E GI 189650

146 I L G V R P T Y C L E Y K N V P T D I N F A N A V S D A L D 2705267
277 I N G I F P D I - - Y K M Y N G S V P F E E R I L A V L Q GI 189650

176 S F - - K S G R A D L A A I Y H E R I D V E G H H Y G P A 2705267
304 W L Q L P K D E R P H F Y T L Y L E E P D S S G H S Y G P V GI 189650

203 S P Q R K D A L K A V D T V L K Y M T K W I Q E R G L Q D R 2705267
334 S S E V I K A L Q R V D G M V G M L M D G L K E L N L H R C GI 189650

FIGURE 4A

233	L N V I I F S D H G M T D I F W M D K V I E L N K Y I S L N	2705267
364	L N L I L I S D H G M E Q G - S C K K Y I Y L N K Y - - L G	GI 189650
263	D L Q Q V K D R - G P V V S L W P A - - P G K H - - - - S	2705267
391	D V K N I K V I Y G P A A R L R P S D V P D K Y Y S F N Y E	GI 189650
285	E I Y N K L S T V E - - - H M T V Y E K E A I P S R F Y Y K	2705267
421	G I A R N L S C R E P N Q H F K P Y L K H F L P K R L H F A	GI 189650
312	K G K F V S P L T L V A D E G W F I T E N R E M L P F W M N	2705267
451	K S D R I E P L T F Y L D P Q W Q L A - - - - - L N	GI 189650
342	S T G R R E G W Q R G W H G Y D N E L M D M R G I F L T L G	2705267
472	P S E R K Y C - G S G F H G S D N V F S N M Q A L F V G Y G	GI 189650
372	P G - R R G N D	2705267
501	P G F K H G I E	GI 189650

FIGURE 4B